HOST RELATIONSHIPS OF SOME SAPYGID WASPS. (HYMENOPTERA, SAPYGIDAE).

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Most sapygid wasps appear to be parasitic in the nests of megachilid bees, although *Polochrum repandum* Spin. and *P. fallax* (Gerst.) are parasites of *Xylocopa violacea* (Linn.) and *X. augusti* Lep., respectively (Friese, 1923). In Europe, Friese (1923, 1926) has recorded *Sapyga quinquepunctata* (Fab.) as parasitic on *Osmia aurulenta* (Panzer) and *O. fulviventris* (Panzer) (= *O. ventralis* Panz.), *Sapyga similis* (Fab.) on *O. nigriventris* (Zetterstedt) (= *corticalis* Müller), *O. maritima* Friese, and *O. fuciformis* Latr., and *Sapyga clavicornis* (Linn.) on *Chelostoma florisomnis* (Linn.). In North America, hosts of sapygids have been recorded as follows:

Species	Host	Area	Authority
Eusapyga aciculata Cress.	*Hoplitis* sp.	Calif.	Hicks, 1934
Eusapyga proxima Cress.	*Dianthidium pudicum* (Cress.)*	Colo.	Hicks, 1927
Eusapyga rubripes Cress.	*Dianthidium pudicum* (Cress.)*	Colo.	Hicks, 1934
Eusapyga verticalis Cress.	*Dianthidium consimile* (Ashm.)	Calif.	Hicks, 1934
Sapyga aculeata Cress.	*Hoplitis productus* (Cress.)	Calif.	Davidson, 1896
Sapyga emarginata Cress.	*Osmia hesperella* Ckll.	Colo.	Hicks, 1934
	O. lignaria propinqua Cress.	Colo.	Hicks, 1934
Sapyga minor Roberts	*Dianthidium consimile* (Ashm.)	Calif.	Hicks, 1934
	Osmia sp.	Colo.	Hicks, 1934
Sapyga sp.	*Dianthidium pudicum* (Cress.)*	Colo.	Hicks, 1934

* Probably *D. pudicum* subsp. *decorum* Timberlake.

To these records the following may be added from California:

Sapyga fulvicornis Cresson. Reared by J. W. MacSwain and the writer, from nests of *Megachile angelarum* Ckll. and *Osmia pikei* Ckll. collected in Mineral King, Tulare County, by G. E. Bohart. Also from nests of *Osmia atrocyanea* Ckll. from Miami Ranger Station, Mariposa Co. Emergence dates in the laboratory ranged from February to June.

Sapyga aculeata Cresson. Reared from nests of *Hoplitis* sp. nr. *productus* (Cresson) in elderberry twigs collected by G. E. Bohart at Mineral King, and by the writer at Miami Ranger Station, Mariposa County. The host bee differs from both *H. productus* (Cresson) and *H. sambuci* (Titus) and according to C. D. Michener is apparently undescribed.

Sapyga sp. An undetermined and possibly new species of *Sapyga* (R. M. Bohart, *in litt.*) was reared from nests of *Ashmeadiella* sp.

collected by J. W. MacSwain and the writer at Mt. Diablo, Contra Costa Co. Although neither the host nor the parasite can be specifically identified at this time, the record is submitted as the first from the genus *Ashmeadiella*.

It may thus be seen that the species of *Sapyga* parasitize megachilid bees of the genera *Osmia, Hoplitis, Chelostoma, Ashmeadiella, Megachile* and *Dianthidium,* and *Eusapyga, Dianthidium,* and *Hoplitis*. Probably both generic lists will be increased when the biologies of our species are more fully known.

Literature Cited.

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